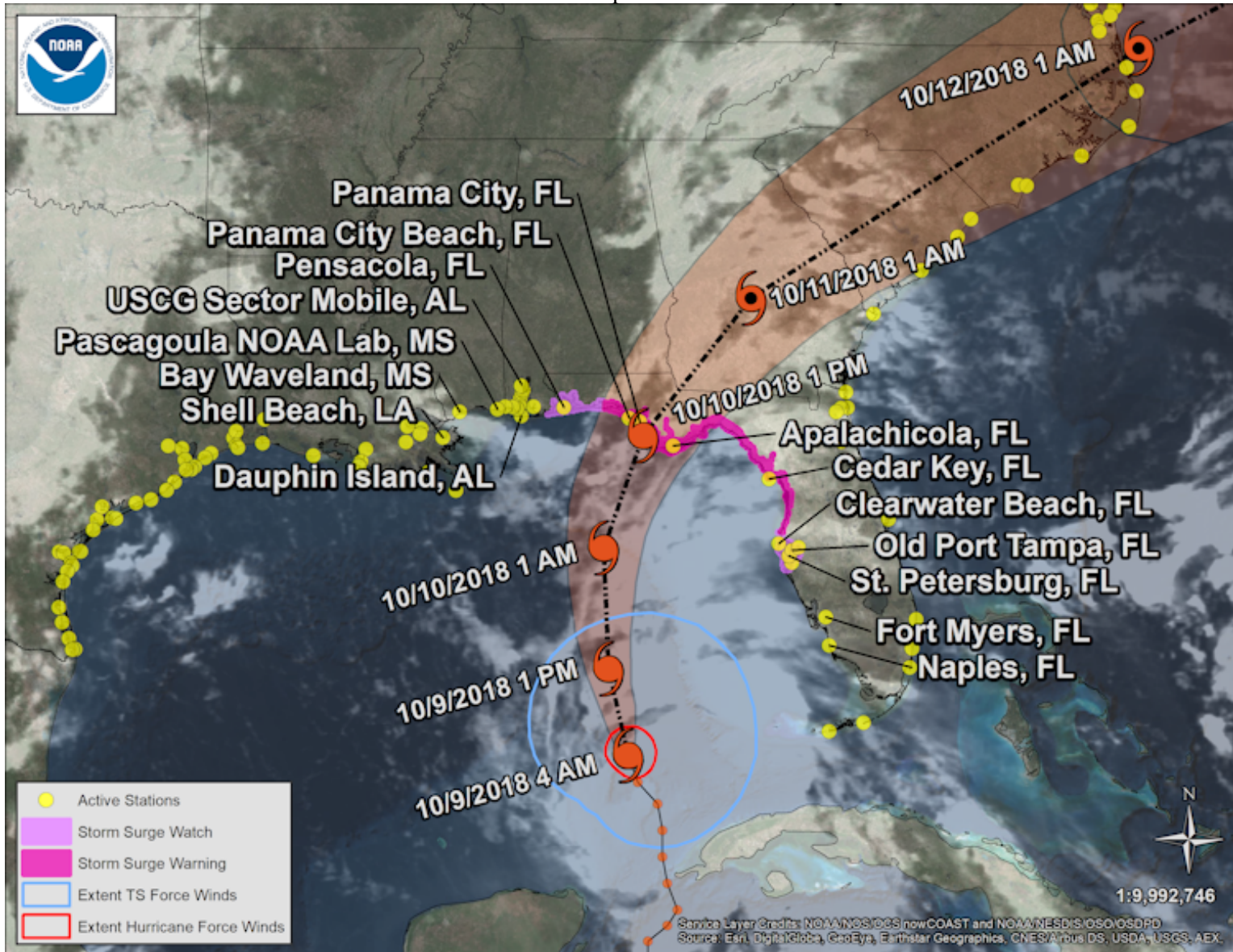




Hurricane Michael QuickLook
Posted: 05:00 CDT 10/09/2018

NOAA and NOAA Partnership Stations Relative to the Storm



Storm Analysis

As of 10/09/2018 05:00 CDT, water levels at stations along the Gulf of Mexico coastline are elevated and continue to rise at several locations. Measured water levels along the Florida panhandle from Cedar Key to Pensacola range from 1 to 2 feet above normal tide levels. Farther south, along the west coast of Florida including locations in and around Tampa Bay, Fort Myers and Naples, water levels are generally measuring 0.5 to 1.5 feet above normal tide levels. Water levels from Alabama to southeastern Louisiana, including Mobile Bay are also elevated and range between 1.5

and 3 feet above tidal predictions with the highest water levels above tide presently being measured at Shell Beach, LA.

In general, the northern Gulf of Mexico experiences low tidal ranges and the potential exists for significant flooding due to Michael regardless of the phase of the tide.

Winds at many locations from southeast Louisiana to southern Florida range between 10 and 20 knots with slightly higher gusts. Barometric pressure continues to fall across the region.

Water Level and Meteorological plots available below are updated automatically. A line denoting Mean Higher High Water (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional real-time and historical inundation information for select stations affected by this storm, please visit Coastal Inundation Dashboard. For additional data, please see the Center for Operational Oceanographic Products & Services website.

For more information or archived products and reports, please visit the Storm QuickLook Homepage.

Analyst: PFF

Select National Hurricane Center Advisory Information:

Hurricane Michael Advisory Number 11
NWS National Hurricane Center Miami FL AL142018
400 AM CDT Tue Oct 09 2018

...MICHAEL MOVING NORTH-NORTHWESTWARD THROUGH THE SOUTHERN GULF OF MEXICO...
...STORM SURGE AND HURRICANE WARNINGS IN EFFECT FOR THE NORTHEASTERN GULF COAST...

SUMMARY OF 400 AM CDT...0900 UTC...INFORMATION

LOCATION...24.1N 85.9W
ABOUT 420 MI...680 KM S OF PANAMA CITY FLORIDA
ABOUT 390 MI...630 KM S OF APALACHICOLA FLORIDA
MAXIMUM SUSTAINED WINDS...90 MPH...150 KM/H
PRESENT MOVEMENT...NNW OR 345 DEGREES AT 12 MPH...19 KM/H
MINIMUM CENTRAL PRESSURE...973 MB...28.74 INCHES

WATCHES AND WARNINGS

CHANGES WITH THIS ADVISORY:

A Tropical Storm Watch is now in effect along the southeastern coast of the United States from Fernandina Beach, Florida to South Santee River, South Carolina.

The Government of Cuba has changed the Hurricane Warning for the province of Pinar del Rio to a Tropical Storm Warning and has discontinued the Tropical Storm Warning for the Isle of Youth.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Storm Surge Warning is in effect for...

- * Okaloosa/Walton County Line Florida to Anclote River Florida

A Storm Surge Watch is in effect for...

- * Anclote River Florida to Anna Maria Island Florida, including Tampa Bay
- * Alabama/Florida border to Okaloosa/Walton County Line Florida

A Hurricane Warning is in effect for...

- * Alabama/Florida border to Suwannee River Florida

A Hurricane Watch is in effect for...

- * Alabama/Florida border to the Mississippi/Alabama border

A Tropical Storm Warning is in effect for...

- * Alabama/Florida border to the Mississippi/Alabama border
- * Suwannee River Florida to Chassahowitzka Florida
- * The Cuban province of Pinar del Rio

A Tropical Storm Watch is in effect for...

- * Chassahowitzka to Anna Maria Island Florida, including Tampa Bay
- * Mississippi/Alabama border to the Mouth of the Pearl River
- * Fernandina Beach, Florida to South Santee River, South Carolina

A Storm Surge Warning means there is a danger of life-threatening inundation, from rising water moving inland from the coastline, during the next 36 hours in the indicated locations. For a depiction of areas at risk, please see the National Weather Service Storm Surge Watch/Warning Graphic, available at hurricanes.gov. This is a life-threatening situation. Persons located within these areas should take all necessary actions to protect life and property from rising water and the potential for other dangerous conditions. Promptly follow evacuation and other instructions from local officials.

A Hurricane Warning means that hurricane conditions are expected somewhere within the warning area. A warning is typically issued 36 hours before the anticipated first occurrence of tropical-storm-force winds, conditions that make outside preparations difficult or dangerous. Preparations to protect life and property should be rushed to completion.

A Tropical Storm Warning means that tropical storm conditions are expected somewhere within the warning area within 36 hours.

A Storm Surge Watch means there is a possibility of life-threatening inundation, from rising water moving inland from the coastline, in the indicated locations during the next 48 hours.

A Hurricane Watch means that hurricane conditions are possible within the watch area. A watch is typically issued 48 hours before the anticipated first occurrence of tropical-storm-force winds, conditions that make outside preparations difficult or dangerous.

A Tropical Storm Watch means that tropical storm conditions are possible within the watch area, generally within 48 hours.

Interests elsewhere across the southeastern United States should monitor the progress of Michael.

For storm information specific to your area in the United States, including possible inland watches and warnings, please monitor products issued by your local National Weather Service forecast office. For storm information specific to your area outside the United States, please monitor products issued by your national meteorological service.

DISCUSSION AND OUTLOOK

At 400 AM CDT (0900 UTC), the center of Hurricane Michael was located near latitude 24.1 North, longitude 85.9 West. Michael is moving toward the north-northwest near 12 mph (19 km/h). A north-northwestward to northward motion is expected through tonight, followed by a northeastward motion on Wednesday and Thursday. On the forecast track, the center of Michael will continue to move over the southern Gulf of Mexico this morning, then move across the eastern Gulf of Mexico later today and tonight. The center of Michael is expected to move inland over the Florida Panhandle or Florida Big Bend area on Wednesday, and then move northeastward across the southeastern United States Wednesday night and Thursday.

Maximum sustained winds are near 90 mph (150 km/h) with higher gusts. Strengthening is expected, and Michael is forecast to be a major hurricane at landfall in Florida. Weakening is expected after landfall as Michael moves through the southeastern United States.

Hurricane-force winds extend outward up to 40 miles (65 km) from the center and tropical-storm-force winds extend outward up to 195 miles (315 km). NOAA buoy 42003 recently reported 1-minute mean winds of 40 mph (65 km/h) and a wind gust of 47 mph (76 km/h).

The estimated minimum central pressure is 973 mb (28.74 inches).

HAZARDS AFFECTING LAND

STORM SURGE: The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water has the potential to reach the following heights above ground if peak surge occurs at the time of high tide...

Indian Pass FL to Cedar Key FL...8-12 ft
Cedar Key FL to Crystal River FL...6-8 ft
Okaloosa/Walton County Line FL to Indian Pass FL...6-9 ft
Crystal River FL to Anclote River FL...4-6 ft
Anclote River to Anna Maria Island FL including Tampa Bay...2-4 ft
Alabama/Florida border to Okaloosa/Walton County Line FL...2-4 ft

WIND: Tropical storm conditions will continue over portions of the far western Cuban province of Pinar del Rio for the next few hours.

Hurricane conditions are expected within the hurricane warning area along the U.S. Gulf Coast by Wednesday, with tropical storm conditions expected by tonight or early Wednesday. Tropical storm conditions are expected in the tropical storm warning area by tonight or early Wednesday, and are possible within the tropical storm watch area by that time. Hurricane conditions are possible within the hurricane watch area by Wednesday.

RAINFALL: Michael is expected to produce the following rainfall amounts through Friday...

Western Cuba...4 to 8 inches, with isolated maximum amounts of 12 inches. This rainfall could lead to life-threatening flash floods and mudslides.

Florida Panhandle and Big Bend, southeast Alabama, and southern Georgia...4 to 8 inches, with isolated maximum amounts of 12 inches. This rainfall could lead to life threatening flash floods.

Eastern Georgia, the Carolinas, and southern Virginia...3 to 6 inches. This rainfall could lead to life-threatening flash floods.

Florida Peninsula, eastern Mid Atlantic, southern New England coast...1-3 inches.

SURF: Swells generated by Michael are affecting the south coast of Cuba and the east coast of the Yucatan Peninsula. Swells are expected to begin affecting the coast of the eastern and northern Gulf of Mexico during the next day or so. These swells are likely to cause life-threatening surf and rip current conditions. Please consult products from your local weather office.

TORNADOES: The threat for tornadoes will increase late tonight into Wednesday over parts of the Florida Panhandle, the northern Florida Peninsula, and southern Georgia.

NEXT ADVISORY

Next intermediate advisory at 700 AM CDT.

Next complete advisory at 1000 AM CDT.

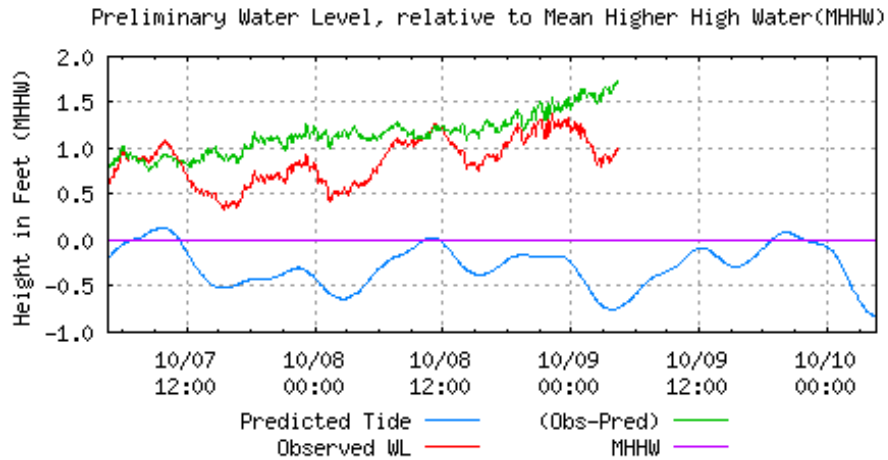
\$\$

Forecaster Beven

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: [Panama City Beach - Water Level](#), [Panama City Beach - Winds](#), [Panama City Beach - Barometric](#), [Panama City - Water Level](#), [Panama City - Winds](#), [Panama City - Barometric](#), [Apalachicola - Water Level](#), [Apalachicola - Winds](#), [Cedar Key - Water Level](#), [Cedar Key - Winds](#), [Clearwater Beach - Water Level](#), [Clearwater Beach - Winds](#), [Clearwater Beach - Barometric](#), [Old Port Tampa - Water Level](#), [Old Port Tampa - Winds](#), [St. Petersburg, Tampa Bay - Water Level](#), [St. Petersburg, Tampa Bay - Winds](#), [Fort Myers, Caloosahatchee River - Water Level](#), [Fort Myers, Caloosahatchee River - Winds](#), [Naples, Gulf of Mexico - Water Level](#), [Pensacola - Water Level](#), [Pensacola - Barometric](#), [Dauphin Island - Water Level](#), [Dauphin Island - Winds](#), [Dauphin Island - Barometric](#), [Coast Guard Sector Mobile - Water Level](#), [Coast Guard Sector Mobile - Winds](#), [Pascagoula NOAA Lab - Water Level](#), [Bay Waveland Yacht Club - Water Level](#), [Bay Waveland Yacht Club - Winds](#), [Shell Beach - Water Level](#), [Shell Beach - Winds](#)

NOAA/NOS/CO-OPS 8729210 Panama City Beach, FL



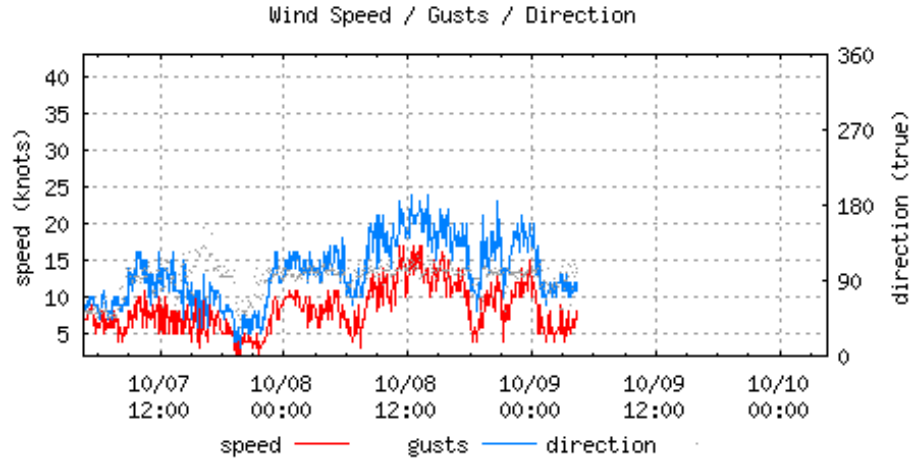
Last Observed Sample: 10/09/2018 04:36 (CDT). Data relative to MHHW

Observed: 0.94 ft. Predicted: -0.73 ft. Residual: 1.67 ft.

Historical Maximum Water Level: Oct 4 1995, 6.84 ft.

Next High Tide: 10/09/2018 12:15 (CDT), -0.09 ft.

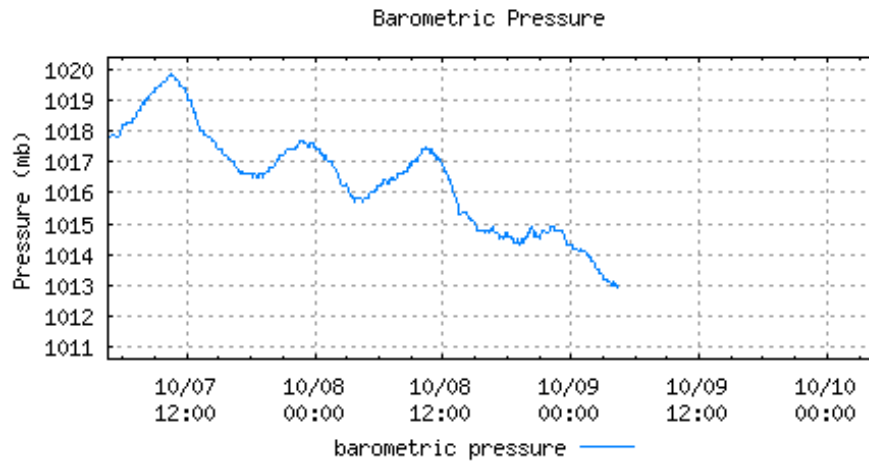
NOAA/NOS/CO-OPS 8729210 Panama City Beach, FL



Last Observed Sample: 10/09/2018 04:36 (CDT)

Wind Speed: 6 knots Gusts: 10 knots Direction: 104° T

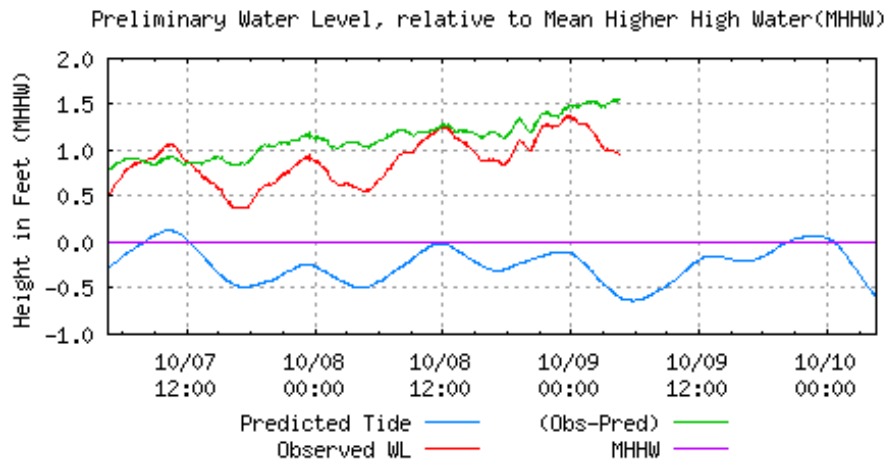
NOAA/NOS/CO-OPS 8729210 Panama City Beach, FL



Last Observed Sample: 10/09/2018 04:36 (CDT)

Barometric Pressure: 1013.1 mb

NOAA/NOS/CO-OPS 8729108 Panama City, FL



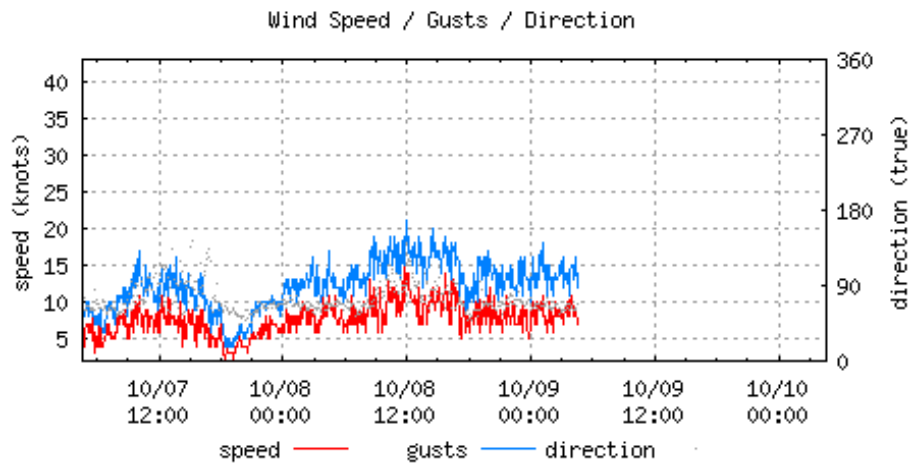
Last Observed Sample: 10/09/2018 04:36 (CDT). Data relative to MHHW

Observed: 0.96 ft. Predicted: -0.60 ft. Residual: 1.56 ft.

Historical Maximum Water Level: Oct 4 1995, 5.72 ft.

Next High Tide: 10/09/2018 13:13 (CDT), -0.15 ft.

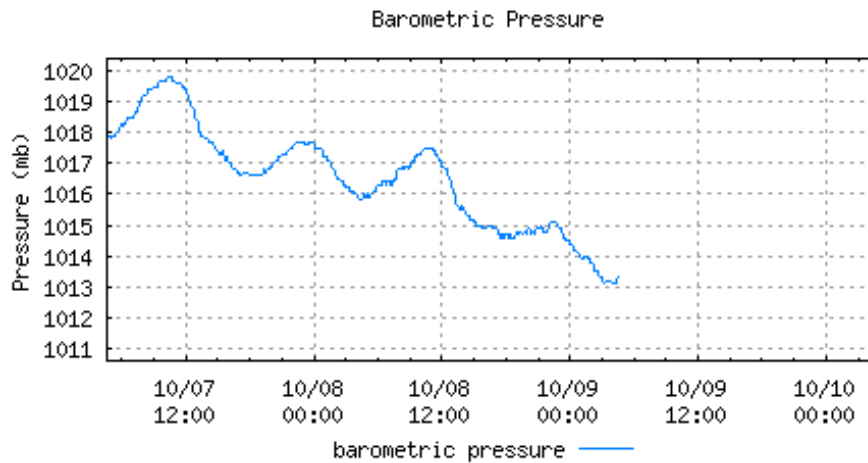
NOAA/NOS/CO-OPS 8729108 Panama City, FL



Last Observed Sample: 10/09/2018 04:36 (CDT)

Wind Speed: 10 knots Gusts: 15 knots Direction: 67° T

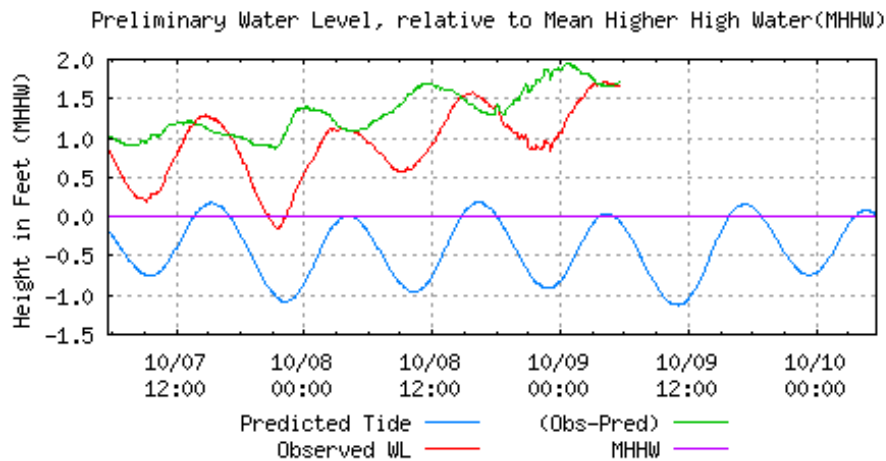
NOAA/NOS/CO-OPS 8729108 Panama City, FL



Last Observed Sample: 10/09/2018 04:36 (CDT)

Barometric Pressure: 1013.3 mb

NOAA/NOS/CO-OPS 8728690 Apalachicola, FL



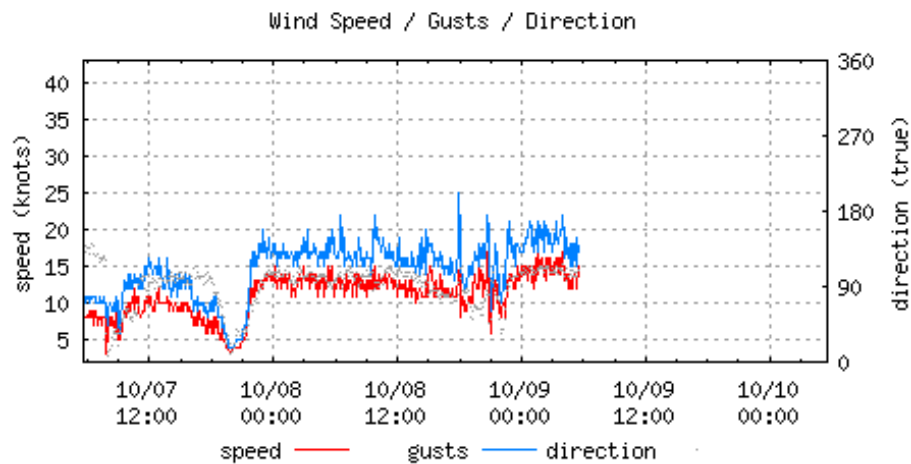
Last Observed Sample: 10/09/2018 05:36 (EDT). Data relative to MHHW

Observed: 1.67 ft. Predicted: -0.06 ft. Residual: 1.73 ft.

Historical Maximum Water Level: Jul 10 2005, 6.43 ft.

Next High Tide: 10/09/2018 17:16 (EDT), 0.16 ft.

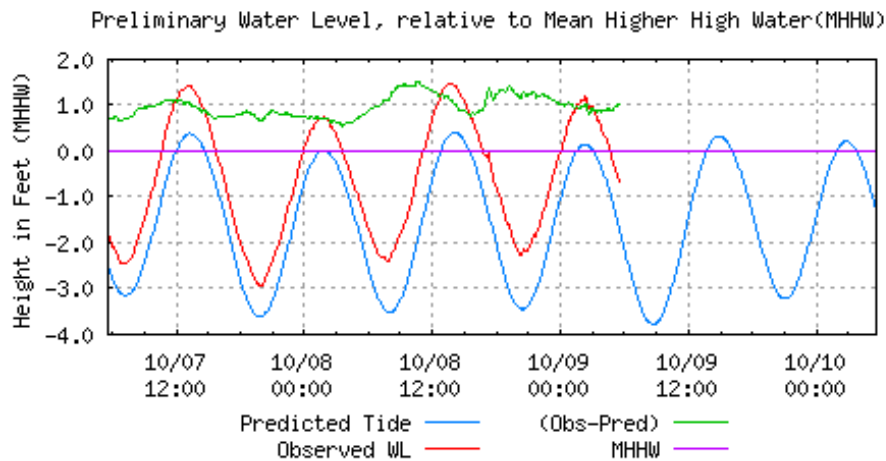
NOAA/NOS/CO-OPS 8728690 Apalachicola, FL



Last Observed Sample: 10/09/2018 05:36 (EDT)

Wind Speed: 13 knots Gusts: 17 knots Direction: 103° T

NOAA/NOS/CO-OPS 8727520 Cedar Key, FL



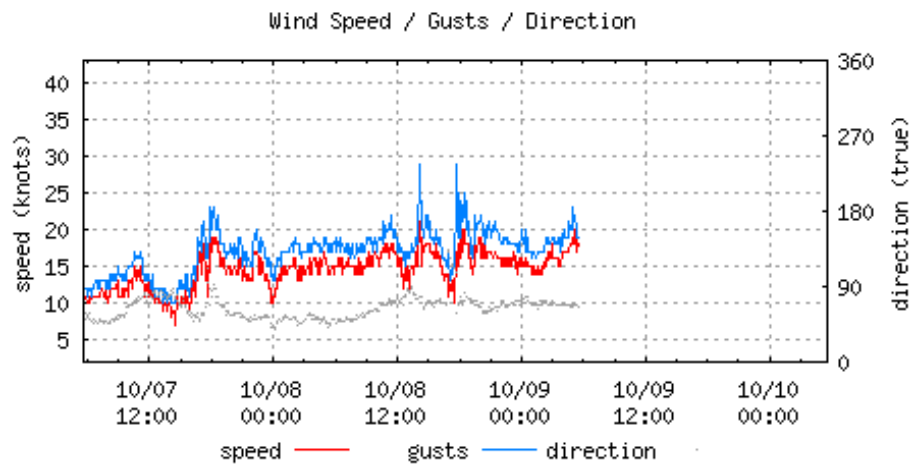
Last Observed Sample: 10/09/2018 05:36 (EDT). Data relative to MHHW

Observed: -0.76 ft. Predicted: -1.78 ft. Residual: 1.02 ft.

Historical Maximum Water Level: Sep 2 2016, 5.98 ft.

Next High Tide: 10/09/2018 14:52 (EDT), 0.32 ft.

NOAA/NOS/CO-OPS 8727520 Cedar Key, FL

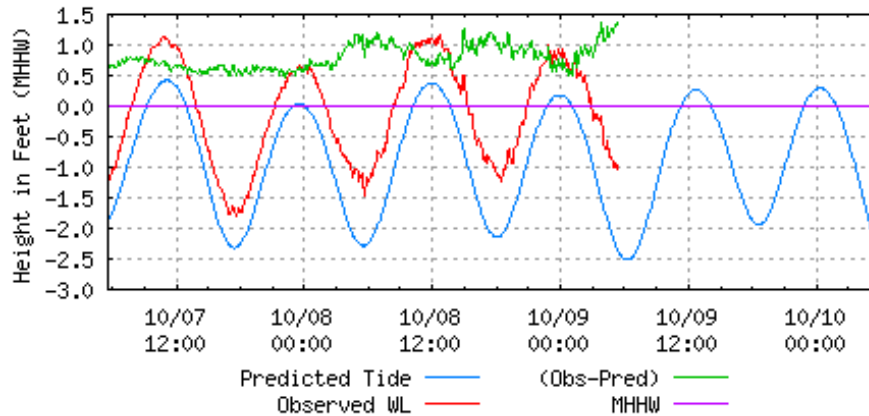


Last Observed Sample: 10/09/2018 05:36 (EDT)

Wind Speed: 17 knots Gusts: 20 knots Direction: 67° T

NOAA/NOS/CO-OPS 8726724 Clearwater Beach, FL

Preliminary Water Level, relative to Mean Higher High Water (MHHW)



Last Observed Sample: 10/09/2018 05:30 (EDT). Data relative to MHHW

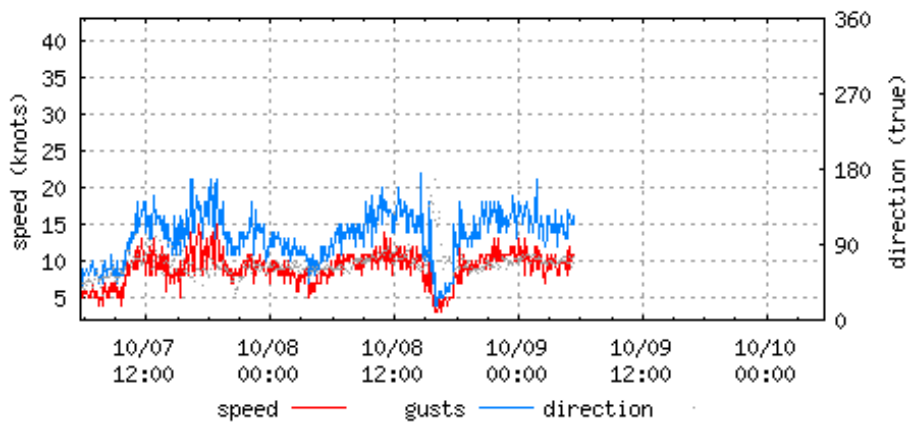
Observed: -1.03 ft. Predicted: -2.39 ft. Residual: 1.36 ft.

Historical Maximum Water Level: Mar 13 1993, 4.00 ft.

Next High Tide: 10/09/2018 12:42 (EDT), 0.26 ft.

NOAA/NOS/CO-OPS 8726724 Clearwater Beach, FL

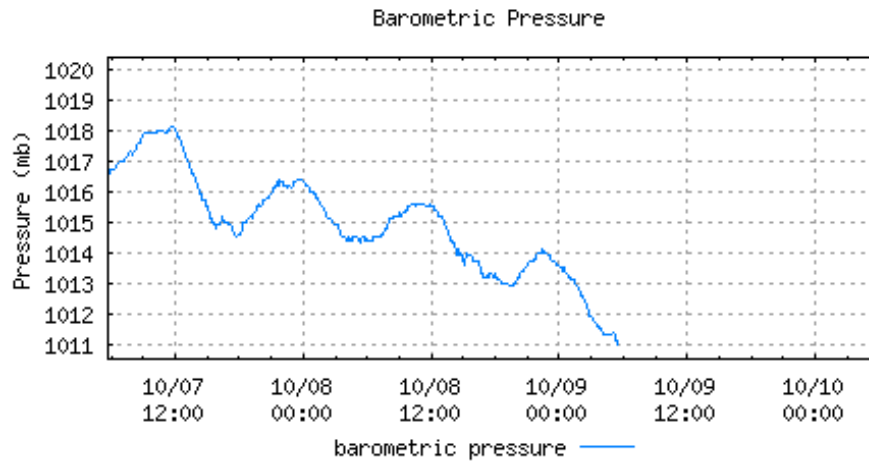
Wind Speed / Gusts / Direction



Last Observed Sample: 10/09/2018 05:30 (EDT)

Wind Speed: 12 knots Gusts: 18 knots Direction: 71° T

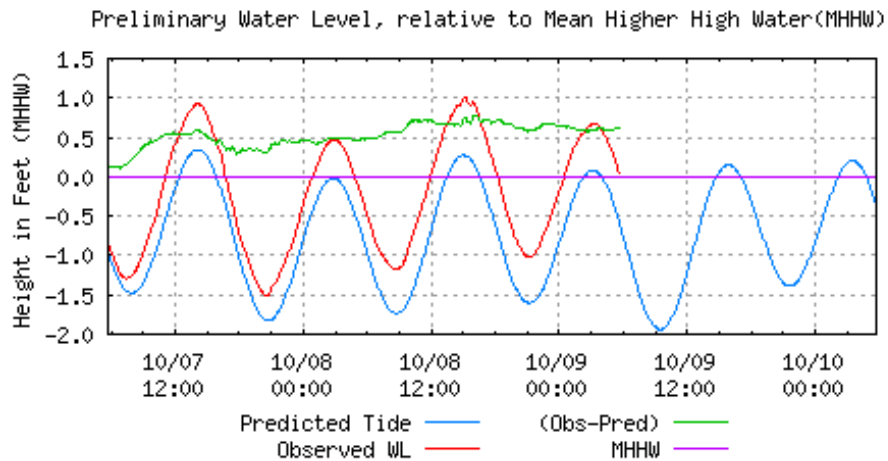
NOAA/NOS/CO-OPS 8726724 Clearwater Beach, FL



Last Observed Sample: 10/09/2018 05:30 (EDT)

Barometric Pressure: 1011.0 mb

NOAA/NOS/CO-OPS 8726607 Old Port Tampa, FL



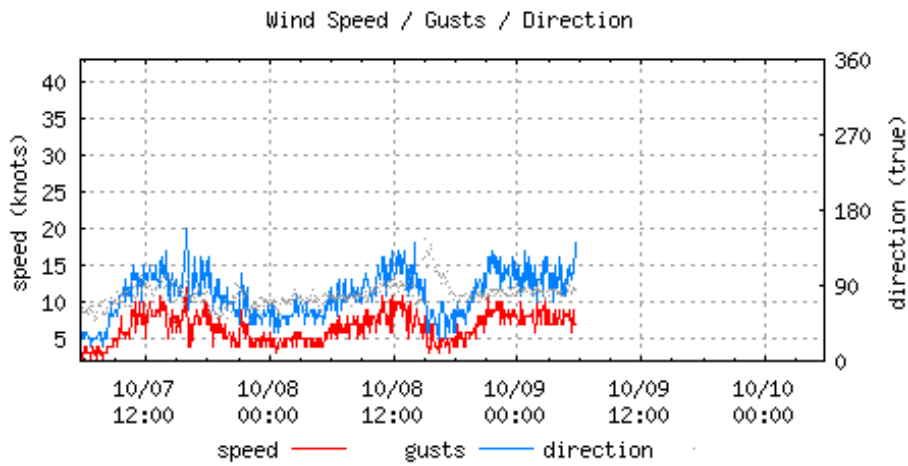
Last Observed Sample: 10/09/2018 05:36 (EDT). Data relative to MHHW

Observed: 0.04 ft. Predicted: -0.58 ft. Residual: 0.62 ft.

Historical Maximum Water Level: Oct 8 1996, 3.60 ft.

Next High Tide: 10/09/2018 15:51 (EDT), 0.15 ft.

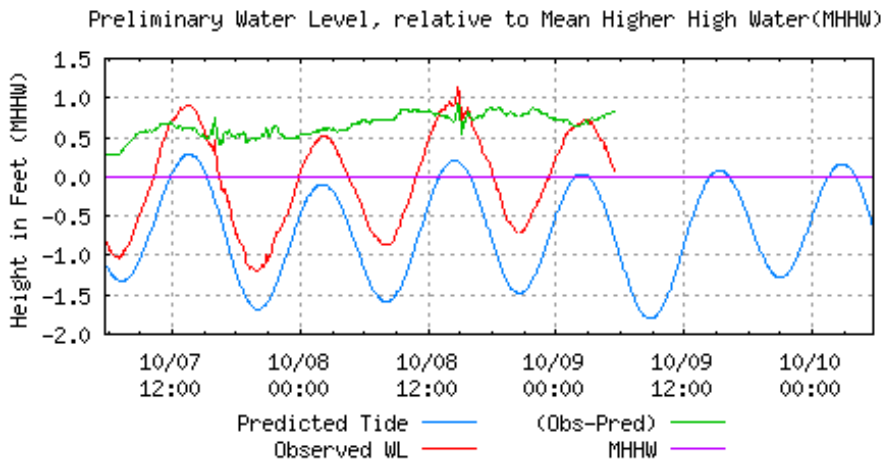
NOAA/NOS/CO-OPS 8726607 Old Port Tampa, FL



Last Observed Sample: 10/09/2018 05:36 (EDT)

Wind Speed: 7 knots Gusts: 18 knots Direction: 85° T

NOAA/NOS/CO-OPS 8726520 St. Petersburg, Tampa Bay, FL



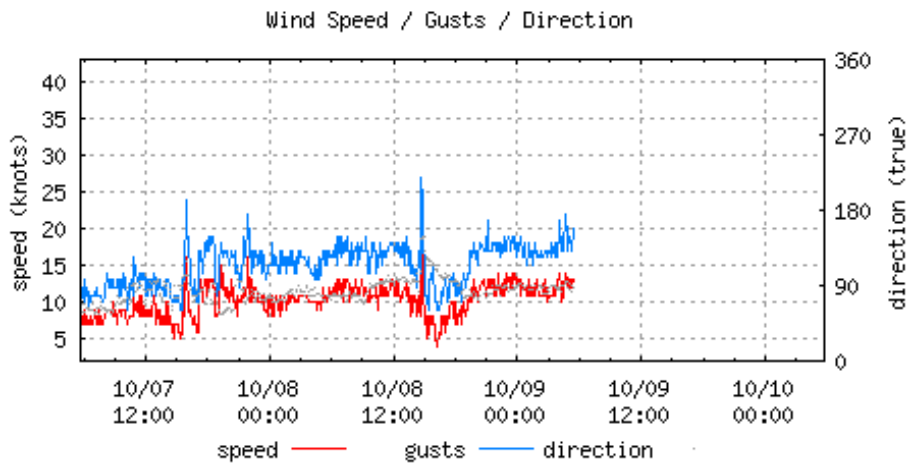
Last Observed Sample: 10/09/2018 05:30 (EDT). Data relative to MHHW

Observed: 0.04 ft. Predicted: -0.81 ft. Residual: 0.85 ft.

Historical Maximum Water Level: Aug 31 1985, 4.00 ft.

Next High Tide: 10/09/2018 15:17 (EDT), 0.08 ft.

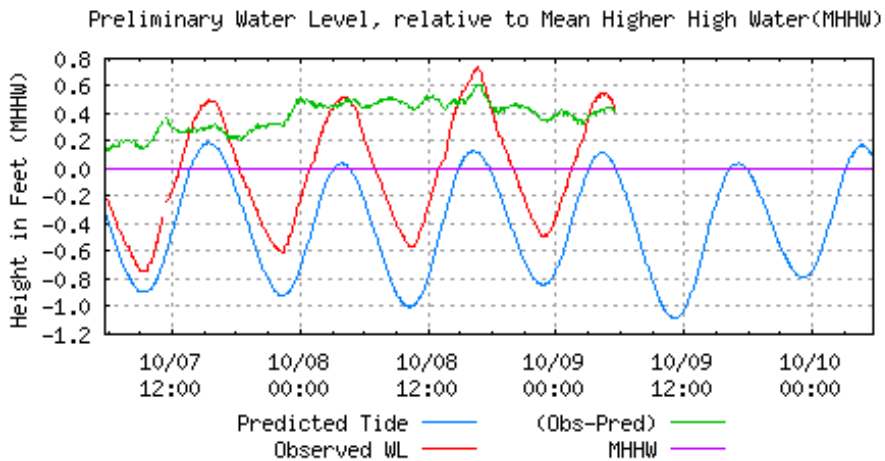
NOAA/NOS/CO-OPS 8726520 St. Petersburg, Tampa Bay, FL



Last Observed Sample: 10/09/2018 05:30 (EDT)

Wind Speed: 11 knots Gusts: 18 knots Direction: 88° T

NOAA/NOS/CO-OPS 8725520 Fort Myers, Caloosahatchee River, FL



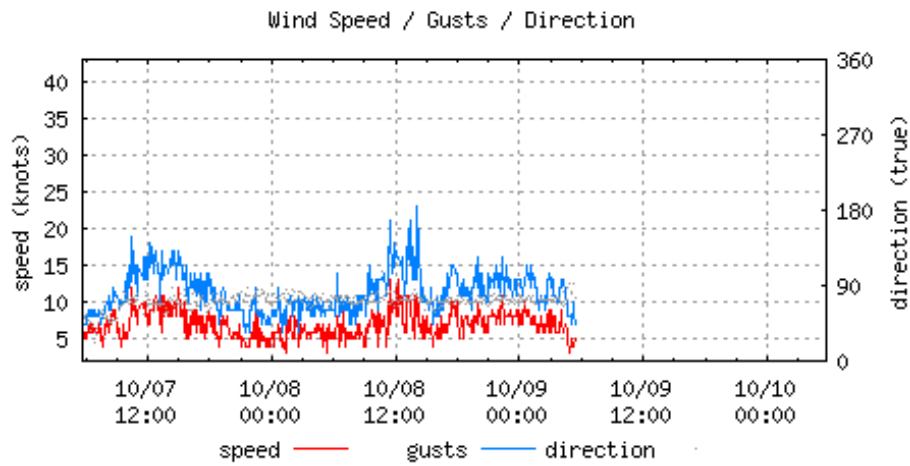
Last Observed Sample: 10/09/2018 05:36 (EDT). Data relative to MHHW

Observed: 0.41 ft. Predicted: -0.01 ft. Residual: 0.42 ft.

Historical Maximum Water Level: Nov 23 1988, 3.41 ft.

Next High Tide: 10/09/2018 17:01 (EDT), 0.04 ft.

NOAA/NOS/CO-OPS 8725520 Fort Myers, Caloosahatchee River, FL

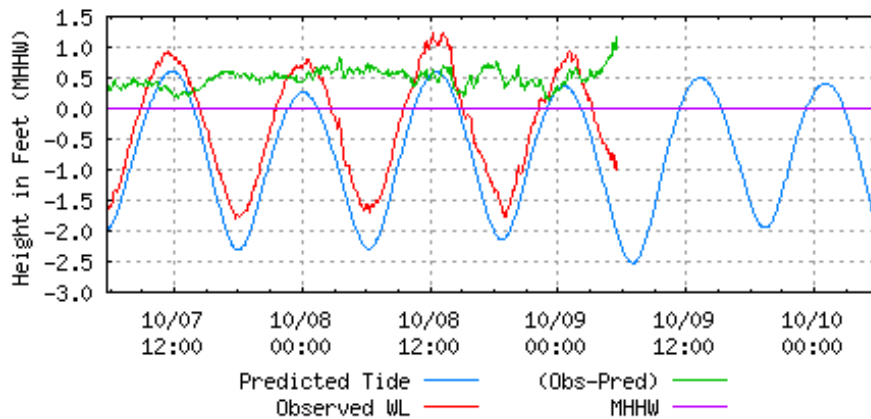


Last Observed Sample: 10/09/2018 05:36 (EDT)

Wind Speed: 8 knots Gusts: 11 knots Direction: 75° T

NOAA/NOS/CO-OPS 8725110 Naples, Gulf of Mexico, FL

Preliminary Water Level, relative to Mean Higher High Water (MHHW)



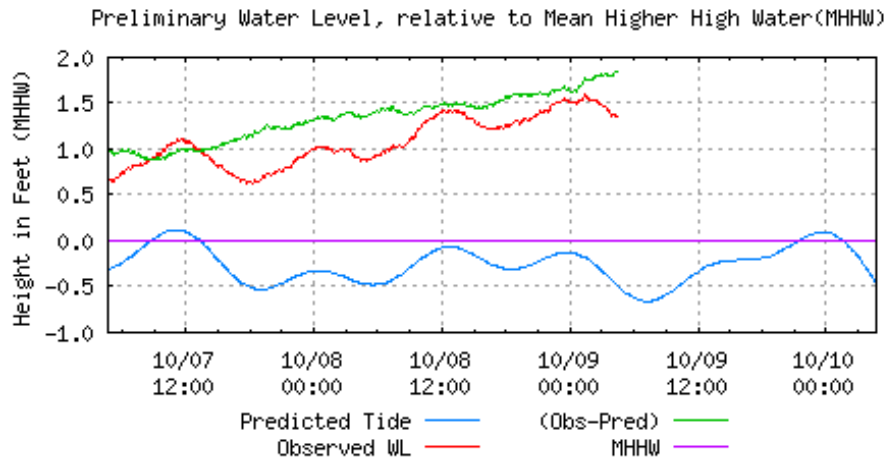
Last Observed Sample: 10/09/2018 05:36 (EDT). Data relative to MHHW

Observed: -1.01 ft. Predicted: -2.10 ft. Residual: 1.09 ft.

Historical Maximum Water Level: Sep 10 2017, 4.02 ft.

Next High Tide: 10/09/2018 13:19 (EDT), 0.51 ft.

NOAA/NOS/CO-OPS 8729840 Pensacola, FL



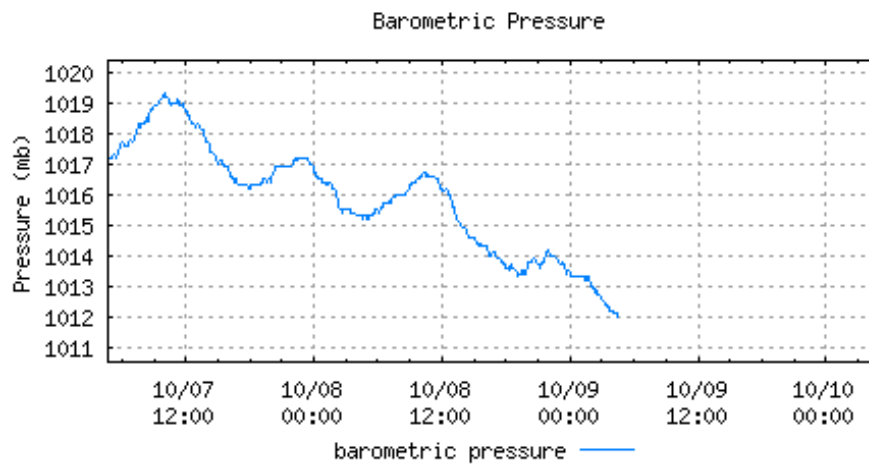
Last Observed Sample: 10/09/2018 04:30 (CDT). Data relative to MHHW

Observed: 1.35 ft. Predicted: -0.50 ft. Residual: 1.85 ft.

Historical Maximum Water Level: Sep 16 2004, 9.54 ft.

Next High Tide: 10/09/2018 23:41 (CDT), 0.09 ft.

NOAA/NOS/CO-OPS 8729840 Pensacola, FL

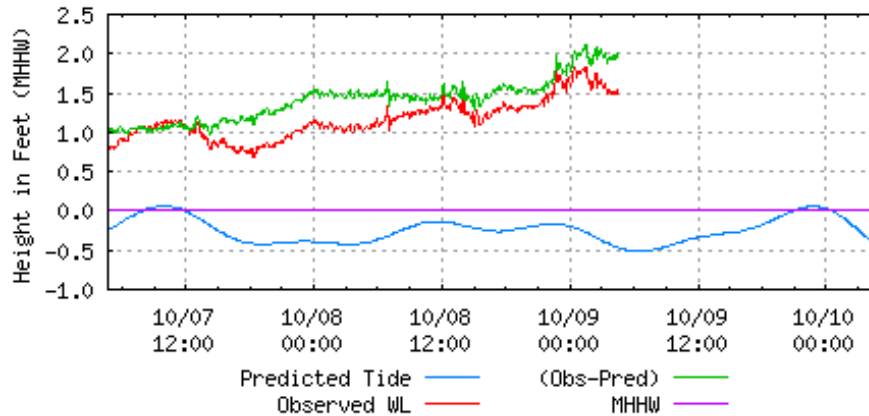


Last Observed Sample: 10/09/2018 04:30 (CDT)

Barometric Pressure: 1012.1 mb

NOAA/NOS/CO-OPS 8735180 Dauphin Island, AL

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 10/09/2018 04:30 (CDT). Data relative to MHHW

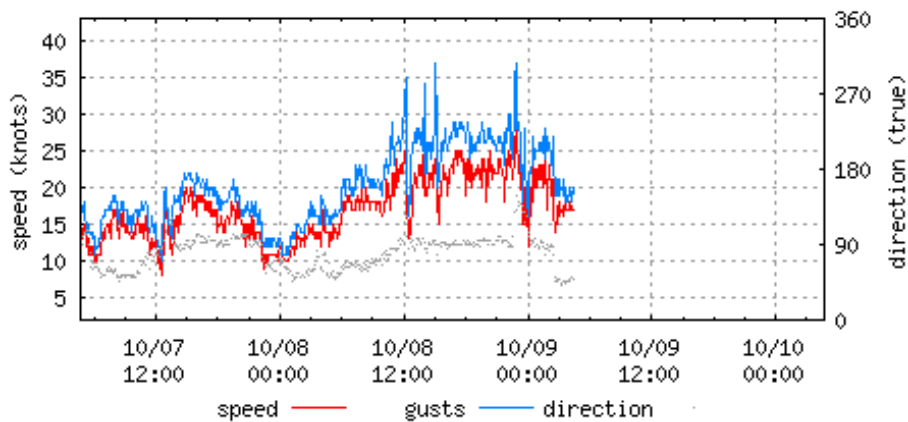
Observed: 1.49 ft. Predicted: -0.46 ft. Residual: 1.95 ft.

Historical Maximum Water Level: Sep 12 1979, 7.96 ft.

Next High Tide: 10/09/2018 22:48 (CDT), 0.05 ft.

NOAA/NOS/CO-OPS 8735180 Dauphin Island, AL

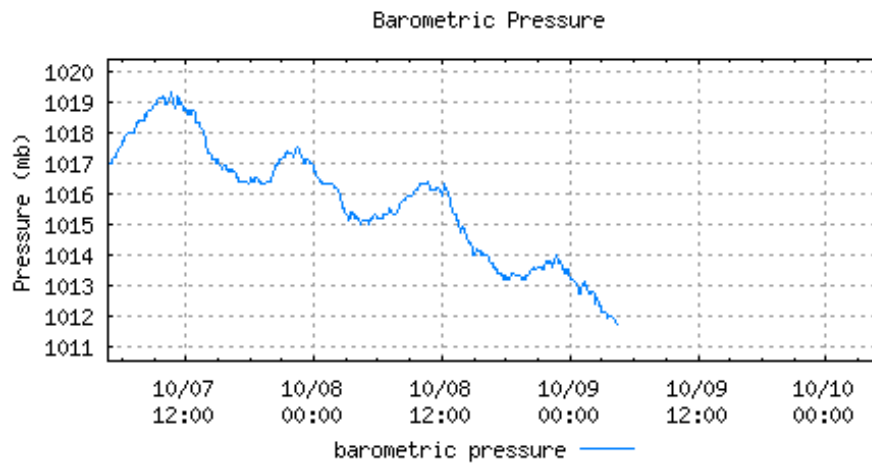
Wind Speed / Gusts / Direction



Last Observed Sample: 10/09/2018 04:30 (CDT)

Wind Speed: 17 knots Gusts: 20 knots Direction: 49° T

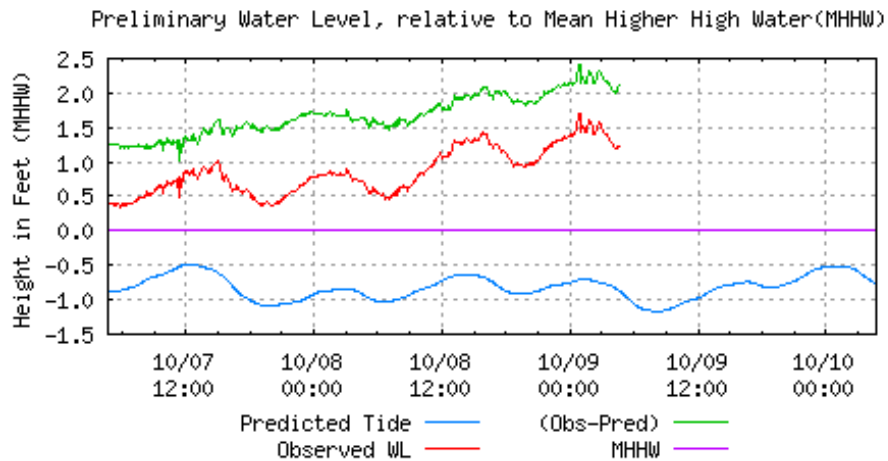
NOAA/NOS/CO-OPS 8735180 Dauphin Island, AL



Last Observed Sample: 10/09/2018 04:30 (CDT)

Barometric Pressure: 1011.7 mb

NOAA/NOS/CO-OPS 8736897 Coast Guard Sector Mobile, AL



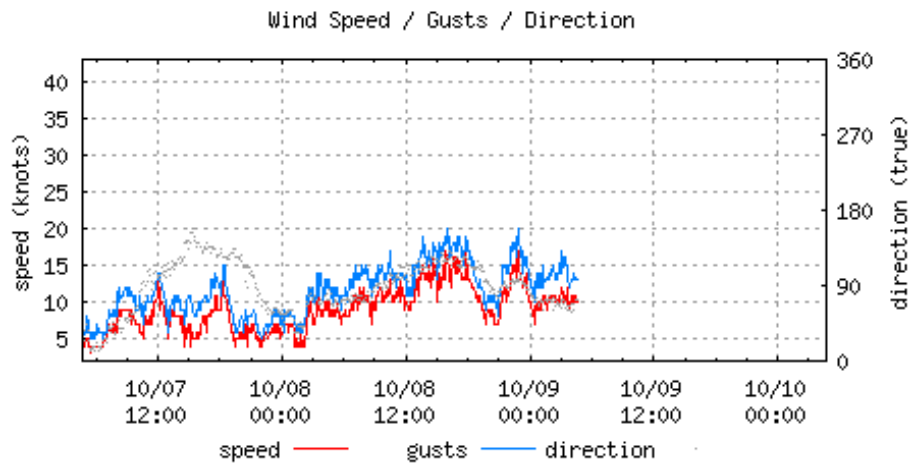
Last Observed Sample: 10/09/2018 04:36 (CDT). Data relative to MHHW

Observed: 1.23 ft. Predicted: -0.87 ft. Residual: 2.10 ft.

Historical Maximum Water Level: Oct 8 2017, 5.38 ft.

Next High Tide: 10/09/2018 16:36 (CDT), -0.74 ft.

NOAA/NOS/CO-OPS 8736897 Coast Guard Sector Mobile, AL

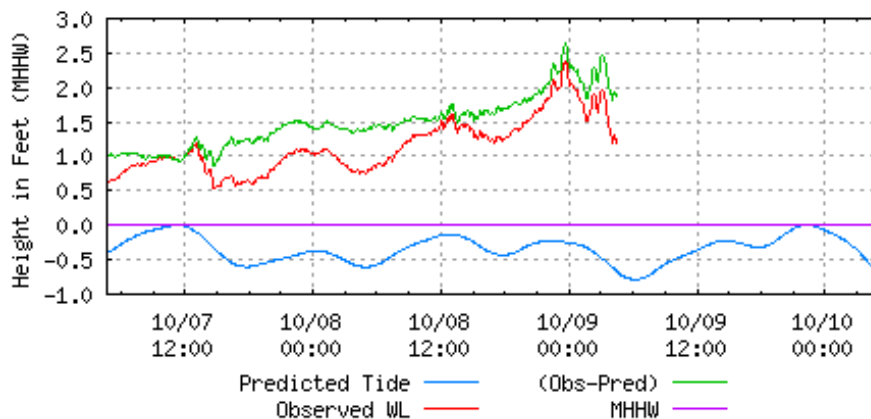


Last Observed Sample: 10/09/2018 04:36 (CDT)

Wind Speed: 10 knots Gusts: 13 knots Direction: 73° T

NOAA/NOS/CO-OPS 8741533 Pascagoula NOAA Lab, MS

Preliminary Water Level, relative to Mean Higher High Water (MHHW)



Last Observed Sample: 10/09/2018 04:30 (CDT). Data relative to MHHW

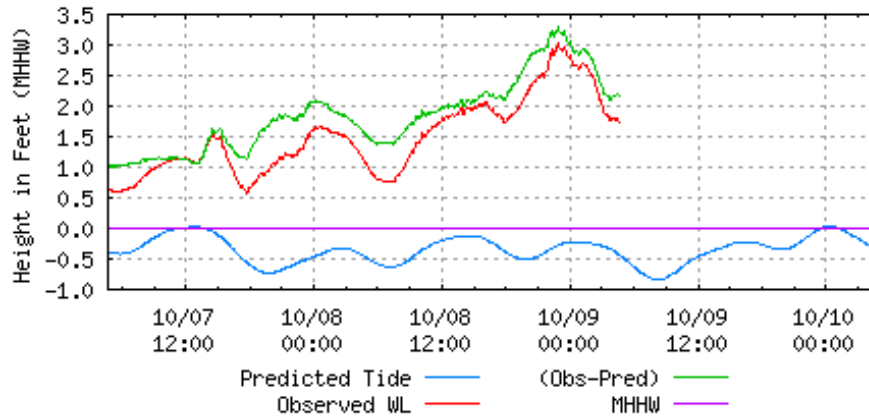
Observed: 1.20 ft. Predicted: -0.67 ft. Residual: 1.87 ft.

Historical Maximum Water Level: Oct 8 2017, 6.20 ft.

Next High Tide: 10/09/2018 14:40 (CDT), -0.22 ft.

NOAA/NOS/CO-OPS 8747437 Bay Waveland Yacht Club, MS

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 10/09/2018 04:36 (CDT). Data relative to MHHW

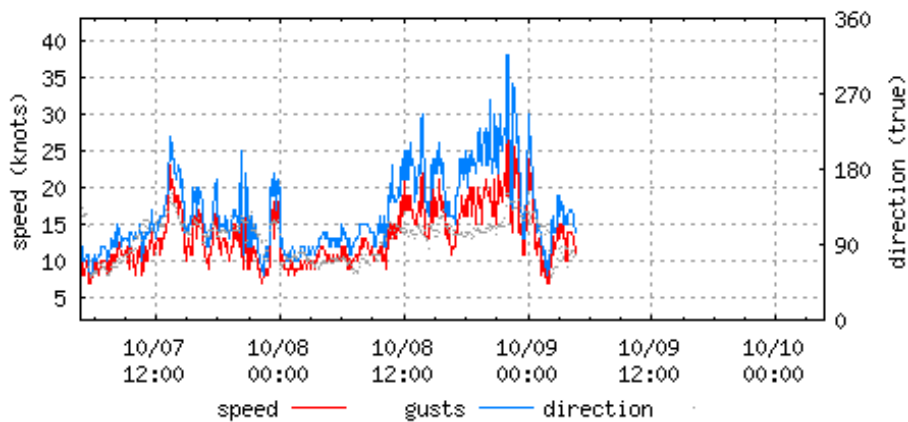
Observed: 1.74 ft. Predicted: -0.43 ft. Residual: 2.17 ft.

Historical Maximum Water Level: Sep 1 2008, 9.10 ft.

Next High Tide: 10/09/2018 16:30 (CDT), -0.22 ft.

NOAA/NOS/CO-OPS 8747437 Bay Waveland Yacht Club, MS

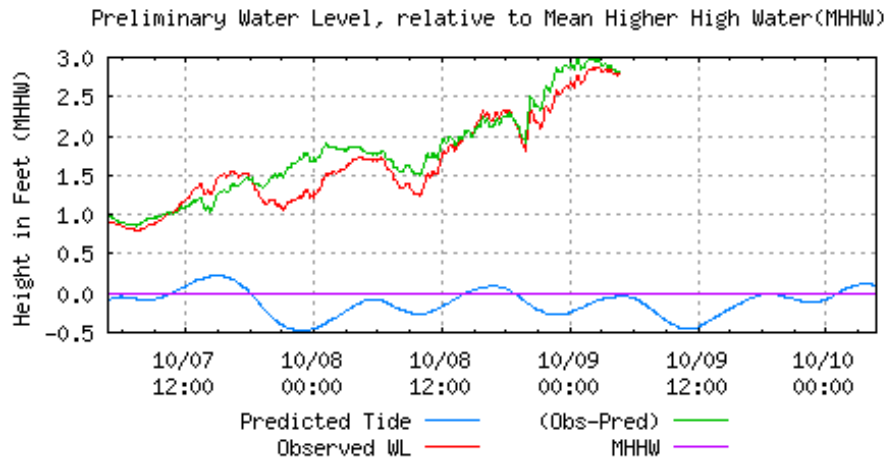
Wind Speed / Gusts / Direction



Last Observed Sample: 10/09/2018 04:36 (CDT)

Wind Speed: 11 knots Gusts: 14 knots Direction: 79° T

NOAA/NOS/CO-OPS 8761305 Shell Beach, LA



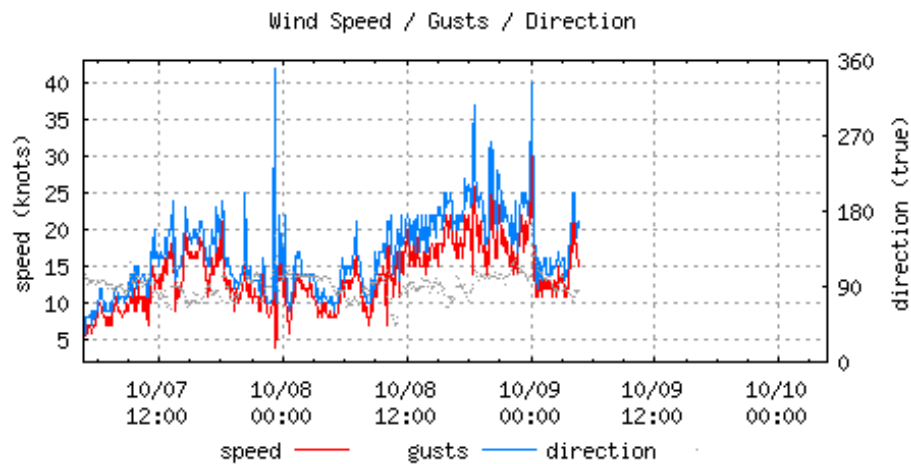
Last Observed Sample: 10/09/2018 04:36 (CDT). Data relative to MHHW

Observed: 2.78 ft. Predicted: -0.04 ft. Residual: 2.82 ft.

Historical Maximum Water Level: Aug 29 2012, 9.37 ft.

Next High Tide: 10/09/2018 04:51 (CDT), -0.04 ft.

NOAA/NOS/CO-OPS 8761305 Shell Beach, LA



Last Observed Sample: 10/09/2018 04:36 (CDT)

Wind Speed: 15 knots Gusts: 21 knots Direction: 85° T

Latest Water Level Observations on MHHW

Station ID	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
8729210	Panama City Beach, FL	10/09/2018 04:36 (CDT)	0.94 ft	-0.73 ft	1.67 ft	1.37 ft
8729108	Panama City, FL	10/09/2018 04:36 (CDT)	0.96 ft	-0.60 ft	1.56 ft	1.37 ft
8728690	Apalachicola, FL	10/09/2018 05:36 (EDT)	1.67 ft	-0.06 ft	1.73 ft	1.71 ft
8727520	Cedar Key, FL	10/09/2018 05:36 (EDT)	-0.76 ft	-1.78 ft	1.02 ft	1.48 ft
8726724	Clearwater Beach, FL	10/09/2018 05:30 (EDT)	-1.03 ft	-2.39 ft	1.36 ft	1.15 ft
8726607	Old Port Tampa, FL	10/09/2018 05:36 (EDT)	0.04 ft	-0.58 ft	0.62 ft	1.01 ft
8726520	St. Petersburg, Tampa Bay, FL	10/09/2018 05:30 (EDT)	0.04 ft	-0.81 ft	0.85 ft	1.13 ft
8725520	Fort Myers, Caloosahatchee River, FL	10/09/2018 05:36 (EDT)	0.41 ft	-0.01 ft	0.42 ft	0.73 ft
8725110	Naples, Gulf of Mexico, FL	10/09/2018 05:36 (EDT)	-1.01 ft	-2.10 ft	1.09 ft	1.22 ft
8729840	Pensacola, FL	10/09/2018 04:30 (CDT)	1.35 ft	-0.50 ft	1.85 ft	1.59 ft
8735180	Dauphin Island, AL	10/09/2018 04:30 (CDT)	1.49 ft	-0.46 ft	1.95 ft	1.84 ft
8736897	Coast Guard Sector Mobile, AL	10/09/2018 04:36 (CDT)	1.23 ft	-0.87 ft	2.10 ft	1.71 ft
8741533	Pascagoula NOAA Lab, MS	10/09/2018 04:30 (CDT)	1.20 ft	-0.67 ft	1.87 ft	2.38 ft
8747437	Bay Waveland Yacht Club, MS	10/09/2018 04:36 (CDT)	1.74 ft	-0.43 ft	2.17 ft	3.02 ft
8761305	Shell Beach, LA	10/09/2018 04:36 (CDT)	2.78 ft	-0.04 ft	2.82 ft	2.88 ft

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